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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/763,171	01/26/2004	Seitoku Kaya	248155US0	6707

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EXAMINER

ZACHARIA, RAMSEY E

ART UNIT	PAPER NUMBER
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1773

DATE MAILED: 07/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/763,171

Applicant(s)

KAYA ET AL.

Examiner

Ramsey Zacharia

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 June 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 13-16 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17-20 is/are allowed.
- 6) ☒ Claim(s) 1-6, 10 and 11 is/are rejected.
- 7) ☒ Claim(s) 7-9 and 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1/26/04; 7/26/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I in the reply filed on 22 June 2005 is acknowledged. The traversal is on the ground(s) that claim 13 encompasses coextrusion as a method of forming and casting a solution/dispersion of the copolymer onto a polyester substrate would result in a coated film as opposed to the laminated carrier film of Group I. This is not found persuasive because coextrusion (i.e. the simultaneous extrusion of all three layers from melts) is a different and distinct method from the method of extruding the tetrafluoroethylene/ethylene copolymer layers onto a preformed polyester layer as recited in Group II. Moreover, there is nothing on the record to demonstrate a structural difference between a coated film and a laminated film provided that each film has a stretched polyester core layer and tetrafluoroethylene/ethylene copolymer outer layers.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 13-16 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 22 June 2005.

3. The applicants' request that the claims of Group II be rejoined if the claims of Group I are ultimately found allowable is acknowledged.

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Priority

4. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Objections

5. Applicant is advised that should claim 4 be found allowable, claim 11 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 102 / 103

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1 and 6 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Bolt (U.S. Patent 4,416,946).

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Bolt teaches a polarizer comprising a polyester core layer and fluorocarbon outer layers (column 1, lines 44-51). The polyester layer may be a stretched polyethylene terephthalate layer (column 2, lines 5-11). The fluorocarbon film may be an ethylene/tetrafluoroethylene copolymer (column 2, lines 25-29).

Bolt is silent as to the haze of the film as measured in accordance with JIS K7105. However, the film is taken to inherently possess a low haze because it must be optically transparent to function as a polarizer. Moreover, Bolt do teach that the fluorocarbon layers have a low haze (column 2, lines 64-6).

Alternatively, in the event that the polarizer of Bolt does not inherently possess a haze of at most 5% as measured in accordance with JIS K7105, it would be obvious to one skilled in the art to minimize the haze and thus maximize the amount of light passing through the polarizer.

Claim Rejections - 35 USC § 103

9. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bolt (U.S. Patent 4,416,946) in view of Ukihashi et al. (U.S. Patent 4,123,602).

Bolt teaches all the limitations of claims 2 and 3, as outlined above, except for the inclusion of a third monomer in the ethylene/tetrafluoroethylene copolymer.

Ukihashi et al. teach an ethylene/tetrafluoroethylene copolymer having a molar ratio of tetrafluoroethylene to ethylene of 40:60 to 60:40 that further comprises 0.1-10 mole% of a repeat unit based on the monomer $\text{CH}_2=\text{CH}-\text{C}_n\text{F}_{2n+1}$ wherein n is an integer from 2 to 10 (column 2, lines 36-45). The polymer has excellent physical properties and improved tensile characteristics at high temperatures (column 2, lines 25-31).

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One skilled in the art would be motivated to use the ethylene/tetrafluoroethylene polymer of Ukihashi et al. as the ethylene/tetrafluoroethylene polymer of Bolt to yield a product having excellent properties and improved tensile characteristics for applications in which the polarizer would be expected to be used at higher temperatures.

10. Claims 4, 5, 10, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bolt (U.S. Patent 4,416,946) in view of Hopper et al. (U.S. Patent 4,388,375).

Bolt teaches all the limitations of claims 4, 5, 10, and 11, as outlined above, except for the thickness of the polyester film.

Hopper et al. is directed to a polarizer comprising an oriented polyester film, such as polyethylene terephthalate, supporting a PVA layer (column 2, lines 20-35). The polyester film has a preferred thickness of 1 to 9 mils, i.e. about 25-225 μm (column 4, lines 47-49).

One skilled in the art would be motivated to use an oriented polyester film having a thickness of about 25-225 μm as the oriented polyester film of Bolt because Hopper et al. illustrate that polyester films having such a thickness are suitable for use in polarizers. The selection of a known material based on its suitability for its intended use supports a *prima facie* obviousness determination. See MPEP 2144.07.

Allowable Subject Matter

11. Claims 17-20 are allowed.

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12. Claims 7-9 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

13. The following is a statement of reasons for the indication of allowable subject matter.

Claims 7-9, 12, and 17-20 are directed to a laminated film comprising films of tetrafluoroethylene/ethylene copolymer laminated on each side of a stretched polyester film wherein the haze of the laminated film is at most 5% as measured in accordance with JIS K7105. The thickness of the tetrafluoroethylene/ethylene copolymer films is 1 to 10 μm .

Bolt represents the closest prior art. However, Bolt teaches the thickness of the fluorocarbon film as in the range of about $\frac{3}{4}$ to 5 mils (i.e. about 19 to 125 μm). Furthermore, Bolt does not provide any reasonably suggestion or motivated to use a thinner fluorocarbon film having a thickness in the range of 1 to 10 μm . By acting as a water barrier, the fluorocarbon film of Bolt serves a different purpose than the tetrafluoroethylene/ethylene film of the instant invention. Therefore, even if one skilled in the art were to optimize the thickness of the fluorocarbon layer, the resulting thickness would not be the same as that of instant claims 7-9, 12, and 17-20 because the fluorocarbon films are designed to perform different functions.

Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramsey Zacharia whose telephone number is (571) 272-1518. The examiner can normally be reached on Monday through Friday from 9 to 5.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney, can be reached at (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ramsey Zacharia
Primary Examiner
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